

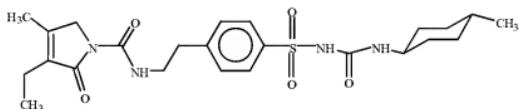
IN THE CLAIMS:

Please amend claims 32 *et seq.* as follows:

Claims 1 to 31 (cancelled)

32. (currently amended) A process for the preparation of *trans*-3-Ethyl-

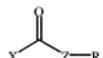
5 2,5-dihydro-4-methyl-N-[2-[4-[[[[4-methylcyclohexyl]amino]carbonyl]amino]sulfonyl]phenyl]ethyl]-2-oxo-1*H*-pyrrole-1-carboxamide, a compound of the formula 1,



Formula 1

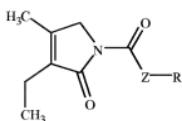
10 comprising,

a) reacting 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of formula 2,



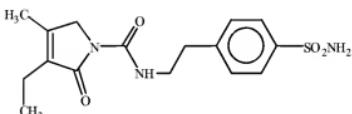
Formula 2

15 to obtain a compound of formula 3,



Formula 3

b) reacting a compound of formula 3 with 4-(2-Aminoethyl)benzene sulfonamide to obtain 4-[2-(3-Ethyl-4-methyl-2-carbonylpyrrolidineamido)ethyl]benzene sulfonamide, a compound of formula 4,



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Formula 4

c) and further reacting the compound of formula 4 with *trans*-4-methylcyclohexyl isocyanate to obtain the compound of formula 1, wherein,

10 X is halogen, nitroaryl or haloaryl,

Z is O, S or NY, wherein Y is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl, aryl or aralkyl; and

15 R is aryl or heteroaryl, where aryl or heteroaryl radical is unsubstituted or substituted by one or more radicals from the group consisting of nitro, halogen, cyano, azido, haloalkyl, CO-R<sup>1</sup>, SR<sup>2</sup>, SO-R<sup>3</sup> and SO<sub>2</sub>-R<sup>4</sup>,

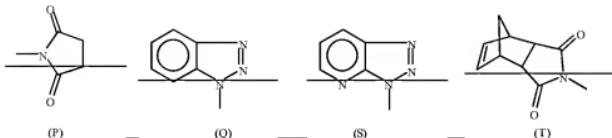
R<sup>1</sup> is H, C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-alkoxy or C<sub>2</sub>-C<sub>5</sub>-alenoxy,

20 R<sup>2</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

R<sup>3</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

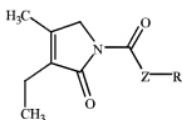
$R^4$  is  $C_1-C_5$ -alkyl,  $C_2-C_5$ -alkenyl,  $C_2-C_5$ -alkynyl,  $C_1-C_5$ -haloalkyl or  $C_2-C_5$ -haloalkenyl, or

— the moiety represented below by P, Q, S or T.



5

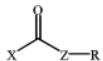
- 33) (currently amended) A process for the preparation of a compound of formula 3,



Formula 3

10

comprising reacting 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of formula 2,



Formula 2

15

wherein,

$X$  is halogen, nitroaryl or haloaryl,

Z is O, S or NY, wherein Y is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl, aryl or aralkyl, and

R is aryl or heteroaryl, where aryl or heteroaryl radical is unsubstituted or substituted by one or more radicals from the group consisting of 5 nitro, halogen, cyano, azido, haloalkyl, CO-R<sup>1</sup>, SR<sup>2</sup>, SO-R<sup>3</sup> and SO<sub>2</sub>-R<sup>4</sup>,

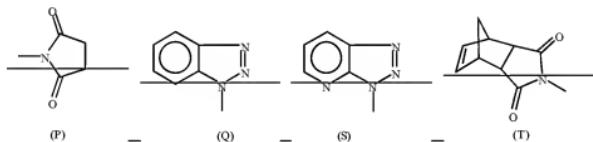
R<sup>1</sup> is H, C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-alkoxy or C<sub>2</sub>-C<sub>5</sub>-alenoxy,

R<sup>2</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or 10 C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

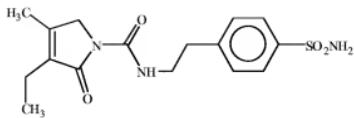
R<sup>3</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

R<sup>4</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or 15 C<sub>2</sub>-C<sub>5</sub>-haloalkenyl, or

the moiety represented below by P, Q, S or T.



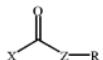
- 34) (currently amended) A process for the preparation of a compound of formula 4,



Formula 4

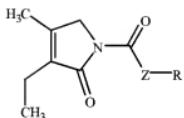
comprising,

- 5        a) reacting 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of formula 2,



Formula 2

to obtain a compound of formula 3,



10        Formula 3

- b) reacting a compound of formula 3 with 4-(2-Aminoethyl)benzene sulfonamide to obtain 4-[2-(3-Ethyl-4-methyl-2-carbonyl pyrrolidine amido)ethyl]benzene sulfonamide, a compound of formula 4,  
wherein,

15        X is halogen, nitroaryl or haloaryl,

Z is O, S or NY, wherein Y is C<sub>4</sub>-C<sub>8</sub>-alkyl, C<sub>4</sub>-C<sub>8</sub>-haloalkyl, aryl or aralkyl and

R is aryl or heteroaryl, where aryl or heteroaryl radical is unsubstituted or substituted by one or more radicals from the group consisting of nitro, halogen, cyano, azido, haloalkyl, CO-R<sup>1</sup>, SR<sup>2</sup>, SO-R<sup>3</sup> and SO<sub>2</sub>-R<sup>4</sup>,

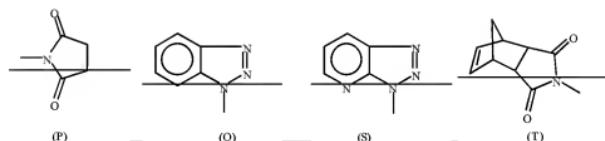
5 R<sup>1</sup> is H, C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-alkoxy or C<sub>2</sub>-C<sub>5</sub>-alenoxy,

R<sup>2</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

10 R<sup>3</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

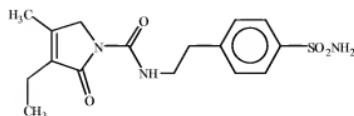
R<sup>4</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl, ; or

the moiety represented below by P, Q, S or T.



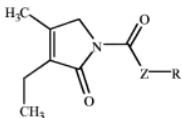
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35) (currently amended) A process for the preparation of a compound of formula 4,



Formula 4

comprising reacting a compound of formula 3



Formula 3

with 4-(2-Aminoethyl)benzene sulfonamide to obtain 4-[2-(3-Ethyl-4-methyl-2-carbonyl pyrrolidine amido)ethyl]benzene sulfonamide, a compound of formula 4,  
5 wherein,

Z is O, S or NY, wherein Y is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl, aryl or aralkyl and

10 R is aryl or heteroaryl, where aryl or heteroaryl radical is unsubstituted or substituted by one or more radicals from the group consisting of nitro, halogen, cyano, azido, haloalkyl, CO-R<sup>1</sup>, SR<sup>2</sup>, SO-R<sup>3</sup> and SO<sub>2</sub>-R<sup>4</sup>,

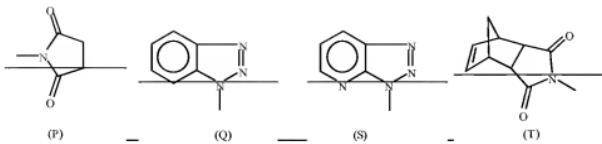
15 R<sup>1</sup> is H, C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-alkoxy or C<sub>2</sub>-C<sub>5</sub>-alenoxy,

R<sup>2</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

R<sup>3</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

20 R<sup>4</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl, or

the moiety represented below by P, Q, S or T.

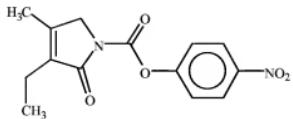


- 36) (previously added) The process as claimed in claim 35 wherein the compound of formula 4 is further reacted with *trans*-4-methylcyclohexyl isocyanate to obtain the compound of formula 1.

5           37) (previously added) The process as claimed in claim 32 wherein the reaction of 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of formula 2, is carried out in presence of an organic base and optionally an acid scavenger compound.

10           38) (previously added) The process as claimed in claim 32 comprising,  
a) reacting 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of formula 2, wherein Z is O and R is 4-nitrophenyl, to obtain a compound of formula 3a,

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Formula 3a

b) reacting the compound of formula 3a with 4-(2-Aminoethyl)benzene sulfonamide to obtain 4-[2-(3-Ethyl-4-methyl-2-carbonyl pyrrolidine amido)ethyl]benzene sulfonamide, a compound of formula 4,

5 c) and further reacting the compound of formula 4 with *trans*-4-methylcyclohexyl isocyanate to obtain the compound of formula 1.

39) (previously added) The process as claimed in claim 37  
10 wherein the organic base is selected from the group consisting of 4-dimethylaminopyridine; 4-pyrrolidinopyridine; diisopropylethylamine, tetramethylguanidine; 1,8-diazabicyclo[5.4.0]undec-7-ene; 1,5-diazabicyclo [4.3.0] non-5-ene; 2,6-lutidine and picolines.

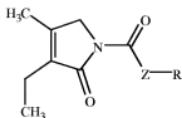
15 40) (previously added) The process as claimed in claim 37 wherein the acid scavenger compound is selected from the group consisting of trialkylamines, pyridine, sodium carbonate and potassium carbonate.

20 41) (previously added) The process as claimed in claim 37 wherein the organic base is 4-dimethylaminopyridine and the acid scavenger compound is triethylamine.

25 42) (previously added) The process as claimed in claim 32 wherein the reaction of 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of

formula 2 is carried out in presence of a solvent selected from the group consisting of aliphatic or aromatic hydrocarbons, ethers, nitriles and amides.

- 5 43) (previously added) The process as claimed in claim 32 wherein the reaction of 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of formula 2 is carried out in a chlorinated hydrocarbon solvent.
- 10 44) (previously added) The process as claimed in claim 32 wherein the reaction of 3-Ethyl-4-methyl-3-pyrrolidin-2-one with a compound of formula 2 is carried out at a temperature between the range of about 0°C to about 35°C for about 8 to about 15 hours.
- 15 45) (previously added) The process as claimed in claim 38 wherein a compound of formula 3a, is obtained in a purity of greater than 99%.
- 46) (previously added) The process as claimed in claim 38 wherein, a compound of formula 4 is obtained in a purity of greater than 99%.
- 47) (previously added) The process as claimed in claim 38 wherein, a compound of formula 1 is obtained in a purity of greater than 99%.
- 20 48) (currently amended) The intermediate compound of formula 3,



Formula 3

wherein,

Z is O, S or NY, wherein Y is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl, aryl or aralkyl, and

5 R is aryl or heteroaryl, where aryl or heteroaryl radical is unsubstituted or substituted by one or more radicals from the group consisting of nitro, halogen, cyano, azido, haloalkyl, CO-R<sup>1</sup>, SR<sup>2</sup>, SO-R<sup>3</sup> and SO<sub>2</sub>-R<sup>4</sup>,

R<sup>1</sup> is H, C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-alkoxy or C<sub>2</sub>-C<sub>5</sub>-alenoxy,

10 R<sup>2</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

R<sup>3</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl,

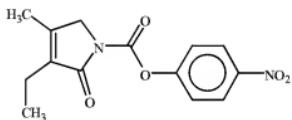
15 R<sup>4</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>2</sub>-C<sub>5</sub>-alkenyl, C<sub>2</sub>-C<sub>5</sub>-alkynyl, C<sub>1</sub>-C<sub>5</sub>-haloalkyl or C<sub>2</sub>-C<sub>5</sub>-haloalkenyl, or

— the moiety represented below by P, Q, S or T.



49) (currently amended) The intermediate compound of formula 3,  
as claimed in claim 48 wherein Z is O and R is aryl or the moiety  
20 represented by (P), (Q), (S) or (T), characterised in that aryl is phenyl  
substituted with one or more radicals selected from nitro, halo, cyano,  
4-trifluoroalkyl, 2,4-bis(trifluoroalkyl) or 2,6-bis(trifluoroalkyl).

- 50) The intermediate compound of formula 3, as claimed in claim 48, wherein Z is O and R is selected from phenyl substituted with 4-nitro, 2,4-dinitro, 2,6-dinitro, 4-halo, 2,4-dihalo, 2,6-dihalo, 4-trifluoromethyl, 2,4-bis(trifluoromethyl) or 2,6-bis(trifluoromethyl).
- 5 51) (previously added) The intermediate compound of formula 3a.



10 Formula 3a

- 52) (previously added) The compound as claimed in claim 51 having a purity greater than 99%.

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